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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/388,813	09/01/1999	WALDEMAR STEPHAN	21222	4469

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THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900

EXAMINER

NGUYEN, VINH P

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/388,813	Applicant(s) STEPHAN, WALDEMAR	
	Examiner VINH P NGUYEN	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 13-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is unclear from the specification what the function of the display (40) is. Furthermore, it appears that the step of "calculating said current draw from said voltage drop" as recited in claims 13 and 18 do not have support in the specification. The specification does not show how this current is calculated.

It also appears that the specification does not have support for the limitation of "a computer unit forming part of said motor control circuit compensates for a temperature of said portion of said conductor" as recited in claim 17 and the limitation of "said resistance is between 1 and 5 mOhms" as recited in claim 21.

It is unclear how the microprocessor (37) and the temperature sensor (47) are used for correcting the current measurement at the conductor segment (38) and what has been detected or analyzed in order to make such correction.

The dependent claims not specifically address share the same indefiniteness as they depend from rejected base claims.

2. Claims 16 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, it is unclear what “a current measured in said portion of said conductor” represents. Is it different from the calculated current in claim 13

In claim 23, it is unclear what is meant by “a regulatory action” and how this “regulator action” is interrelated and associated with the calculated current..

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-16 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s admitted prior art in view of Lund et al (Pat # 5,804,979).

As to claims 13-14 ,18 ,20 and 22, Applicant’s admitted prior art on pages 1-2 of the specification teach that it would have been well known to have a an electronically controlled pump assembly including an electric motor connected to a power line, a motor control circuit connected to the motor and a pump driven by the motor. The admitted prior art does not teach a technique of measuring a current flowing through a segment of a conductor without using a resistor. Lund et al disclose a circuit for measuring in circuit resistance and current as shown in figure 1 having a carried current conductor (10), a voltmeter (28) for measuring the voltage across a segment of the conductor (10) and a

microprocessor (30) for calculating a current draw from the voltage. It would have been obvious for one of ordinary skill in the art to provide a technique of calculating a current draw from a measured voltage as taught by Lund et al to the device of admitted prior art so that undesired power loss is avoided and the accurate current measurement is obtained.

As to claim 15, it appears that Lund et al teach that the voltage drop is measured and the current draw is calculated from the voltage drop by the microprocessor (30).

As to claim 16, as soon as the device of admitted prior art using the technique of calculating a current as taught by Lund et al, it appears that the calculated current is converted into a current draw of the pump.

As to claim 19, it appears that the portion of the conductor is a piece of resistance wire with a known specific resistance and a defined length.

As to claim 21, the resistance for the wire between 1 and 5mOhm would have been an obvious design choice since this resistance would depend on the type of the wire, the length of the wire and the diameter of the wire.

5. Applicant's arguments filed on 12/23/2002 have been fully considered but they are not persuasive.

6. It appears that Applicant's remark filed on 12/23/2002, Applicant indicated that "a more global temperature measurement could be made but since the voltage drop of a resistor is a function of temperature, everything else being understood, there is no problem in correcting the voltage drop for temperature". It appears that this remark has

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not address the issue of how the microprocessor (37) and the temperature sensor (47) are used for correcting the current measurement at the conductor segment (38) and what has been detected or analyzed in order to make such correction. It appears that Applicant fails to address such issue.


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Harnden, Jr. et al (pat # 4,584,525) disclose a current shunt system for known conductor.

8. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.


VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829
03/07/2003